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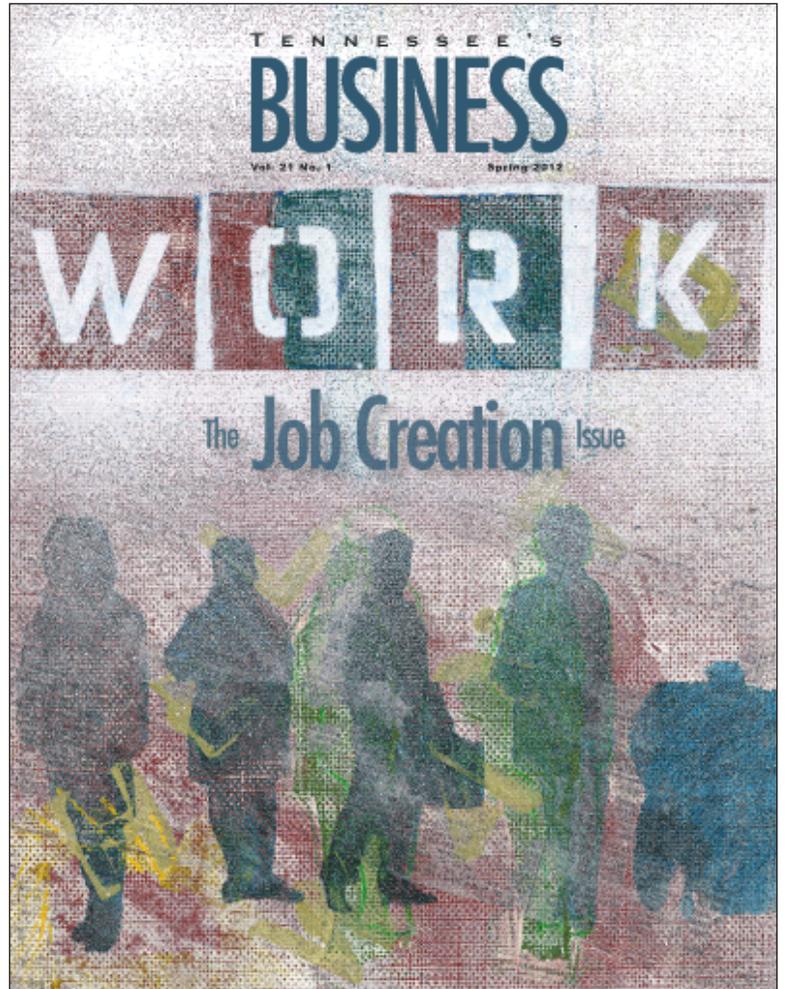
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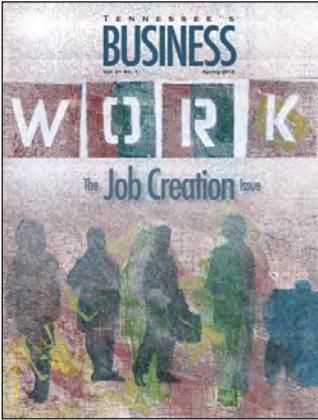


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JOB CREATION



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EXECUTIVE SUMMARY: STRATEGIC PLANS

Goal: Tennessee First in Southeast for Good Jobs



A key underpinning of the Jobs4TN plan is the decentralization of ECD into nine distinct regions.

In April 2011, Governor Bill Haslam released the Jobs4TN plan, a roadmap for the future of economic development in Tennessee. The plan focused the efforts of Tennessee’s Department of Economic and Community Development (ECD) on strategic business clusters where Tennessee has a distinct competitive advantage. Jobs4TN emphasized aiding existing Tennessee businesses to grow and expand in addition to adding resources and senior leadership talent to accomplish the long-standing goal of recruiting new businesses and jobs to the state.

Nine Regional Centers

A key underpinning of the Jobs4TN plan is the decentralization of ECD into nine distinct regions across the state, each home to a jobs base camp, following the existing boundaries of the state’s nine development districts. During the course of the past year, ECD’s nine new regional directors have focused their energy on working with ECD business development staff along with the extensive network of local economic development officials and other

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EXECUTIVE SUMMARY

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Strategic partnerships are needed to engage the Jobs4TN plan in these areas: tech transfer from research institutions, workforce development efforts, innovation support at regional business accelerators, and early-stage capital investment to support Tennessee entrepreneurs.

stakeholders to coordinate and focus state, regional, and local resources to more fully support expansions of existing Tennessee businesses. They also participated heavily in new business and industry recruitment.

The regional directors through a variety of outreach efforts, stakeholder meetings, and consensus building activities have created targeted strategic plans for each of their regions. These plans outline how ECD's regional staff will

- lead new efforts and initiatives in their regions,
- support existing local economic development organizations, and
- serve as an effective conduit between the department and regional stakeholders.

ECD Commissioner Bill Hagerty encouraged the regional directors and their staffs to develop these plans in close coordination with the many local and regional stakeholders that constitute the economic development community in each region. The ECD regional staffs used a variety of methods to develop consensus in their regions about how the newly decentralized ECD structure will be effective. In some regions, local stakeholders already had existing strategic plans for their own organizations, and those were reviewed and incorporated. In other situations, large stakeholder meetings were needed to bring different economic development forces together, or combinations of these two approaches were used as well as one-on-one meetings with key stakeholders.

The results are nine distinct plans tailored to their individual regions of the state, while common themes run through many of the plans.

Best Practices

Throughout the state, local economic development officials in predominately rural regions expressed a need for more training. ECD regional staffs will offer best practices training to assist economic development officials in dealing with recruitment prospects, including requests for information and requests for proposals. Stemming from positive feedback out of the Governor's Conference, regional

directors will also offer more general training for local economic development officials on best practices for broader recruitment techniques and technical assistance programs for manufacturers to help them remain competitive.

In the Southern Middle region, the ECD staff is holding regional training sessions for local economic development professionals on best practices for answering prospective company requests for information and requests for proposals. Northern Middle Tennessee regional staff will have a broader approach, offering training to interested economic development offices on national best practices for recruiting. ECD staff will offer customized training sessions to interested organizations, with interest anticipated from more rural areas of the region. Allen Borden, ECD statewide director, is charged with implementing best practices programs for use in all of the regions where stakeholders express a need.

Business Development

Governor Haslam's Jobs4TN plan revealed that more than 86 percent of all new jobs in Tennessee are created by existing businesses. Feedback from businesses across the state and from local economic development partners showed the need for continual outreach to Tennessee businesses. ECD regional staff will work in collaboration with local chambers and economic development offices to reach out to existing businesses while local economic development professionals take more of a lead in larger markets. In more rural areas, ECD regional staff will coordinate with local chambers and economic development offices to make sure the largest employers are covered, expansion opportunities are fully explored, and state incentives are explained thoroughly.

ECD regional staff will also play a vital role in all nine regions in the business recruitment process. ECD staff often serves as a point of contact and coordination during prospect visits to the state. The East Tennessee regional staff and regional partners are launching an effort to inventory companies in the region that fall within the six targeted clusters of the Jobs4TN plan. ECD staff and regional stakeholders will then contact suppliers of those companies to

see if co-location makes sense. Other regions such as Northwest and Southeast will pursue aggressive visit schedules and coordinate larger market visits with local chambers and economic development organizations.

Partnerships

ECD regional staff, through their outreach and stakeholder meetings, identified areas where strategic partnerships are needed to engage the Jobs4TN plan. Those areas include

- tech transfer from research institutions,
- workforce development efforts,
- innovation support at regional business accelerators, and
- early-stage capital investment to support Tennessee entrepreneurs.

Regional directors and their staffs will pull together stakeholders in these areas and others to facilitate new partnerships supporting the goals of Jobs4TN. One of the more crucial areas where partnerships and new avenues of communication are needed is in the workforce development arena.

In several regions, ECD staff plan to play a matchmaking roll between large employers and workforce development resources. In the Greater Memphis region, ECD staff and the staffs of local workforce development boards will work with the new WINrecruits.com database to cross-reference employer need and employee availability. ECD staffs see a need to partner with the new business accelerator grant winners in some way, from connecting the incubators to rural entrepreneurs to helping the incubators find sustainable funding.

Enhanced Communication

ECD regional directors are uniquely positioned to facilitate communication between different local and regional economic development partners. Enhanced communication will come in different forms depending on the needs of the region. ECD regional staff members are playing a role in a variety of new efforts, including

- regional industrial site inventories,
- development of marketing materials,

- regular stakeholder meetings, and
- aligning workforce development programs with employer need.

In addition, ECD's regional directors play a unique role interfacing with other state agencies to facilitate the needs of Tennessee businesses as they expand and grow jobs in our state. In many cases this enhanced communication will mean ECD regional staffs fostering more regional thinking and planning among peer organizations.

In the Upper Cumberland region, ECD staff and regional partners will host an innovation forum that highlights the importance of entrepreneurship and technology in job creation. The event will connect entrepreneurs with resources for accessing capital, mentors, and innovation networks. The Northeast Tennessee ECD regional staff will play a role in a consortium of stakeholder organizations that will develop an external marketing plan for the region in 2012 including trips to trade shows in key sectors and collateral promotional material. Across several of the regions, an industrial site inventory program is also in the works as no such resource now exists.

Conclusion

ECD's nine regional strategic plans are living documents to be revisited with stakeholders and other local economic development players on a regular basis. These plans are the first step in framing the roles of these new regional staffs and the jobs base camps. It is clear that a new decentralized model operating at a more granular level in concert with local economic development forces will allow more effective marshalling of all resources to support Tennessee job growth. The results will play a major role in making Tennessee the number-one state in the Southeast for high-quality jobs. ■

The Tennessee Department of Economic and Community Development's mission is to develop strategies that help make Tennessee the number-one location in the Southeast for high-quality jobs. The department seeks to attract new corporate investment in Tennessee and works with Tennessee companies to facilitate expansion and economic growth.

Regional staff responsibilities include industrial site inventories, development of marketing materials, regular stakeholder meetings, and aligning workforce development programs with employer need.

Jobs4TN PLAN

RESULTS FROM ECD REVIEW

In 2010, expansion of existing business accounted for nearly 86 percent of new jobs created in Tennessee.

The Jobs4TN plan lays out Governor Bill Haslam’s administration’s economic development strategy resulting from a review of the department of Economic and Community Development (ECD), focusing on

- prioritizing the strategic recruitment of target industries,
- assisting existing Tennessee businesses in expansions and remaining competitive,
- supporting regional and rural economic development strategies, and
- investing in innovation and reducing business regulation.

“My top priority is for Tennessee to be the number-one location in the Southeast for high-quality jobs,” Haslam said. “Our Jobs4TN plan is a blueprint for doing just that. By leveraging our existing assets in each region, we will be able to attract new businesses to the state while helping our existing businesses expand and remain competitive. We will also be making significant investments in innovation to

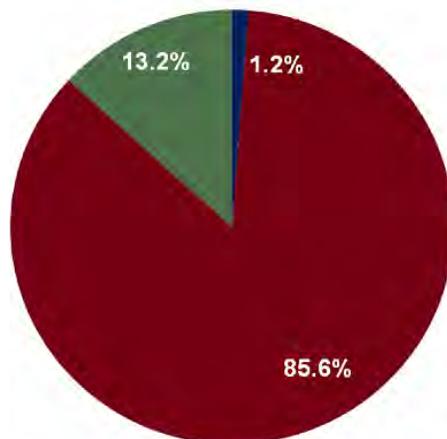
position Tennessee as a national leader well into the future.”

The governor’s Jobs4TN plan was developed over a 45-day period and involved interviews with more than 300 stakeholders, community leaders, and national experts as well as through seven roundtables across the state. The plan includes four key strategies.

Target Clusters, Existing Industries

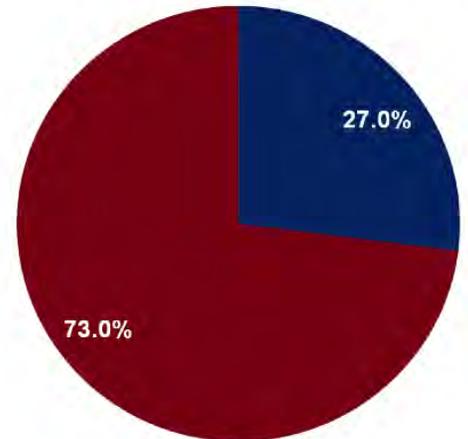
Tennessee will focus recruitment efforts on six target clusters in which the state has a clear competitive advantage: automotive; chemicals and plastics; transportation, logistics, and distribution services; business services; healthcare; advanced manufacturing and energy technologies. In 2010, expansion of existing business accounted for nearly 86 percent of new jobs in Tennessee. The state will focus on helping existing businesses expand and remain competitive through a targeted outreach program and a new existing-business toolkit of incentives and resources.

All Jobs

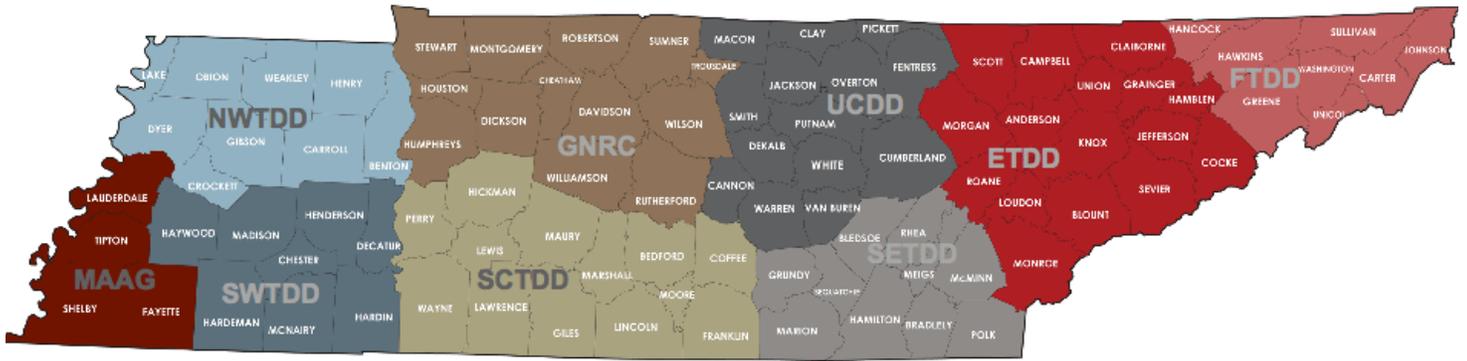


- Relocations to Tennessee
- Expansions of Tennessee Businesses
- Newly Created Businesses

ECD Announced Jobs



- Relocations to Tennessee
- Expansions of Tennessee Businesses



Regional Jobs Base Camps

ECD fundamentally restructured its field staff to establish a jobs base camp in each of nine regions across the state. Each camp is working with local partners to develop or revise a regional economic development plan and align existing federal and state resources around that plan. A key function of these base camps is reaching out to rural counties to incorporate them into broader regional economic development strategies that leverage existing resources and maximize the assets of rural communities. An assistant commissioner of Rural Development will help to lead this effort. ECD has selected regional directors to run each jobs base camp:

- **Northeast Tennessee** – Allen Borden;
- **East Tennessee** – Kirk Huddleston;
- **Southeast Tennessee** – Patsy Hazlewood;
- **Upper Cumberland** – Rebecca Hargrove Smith;
- **Northern Middle Tennessee** – Reggie Mudd;
- **Southern Middle Tennessee** – Jamie Stitt;
- **Northwest Tennessee** – Blake Swaggart;
- **Southwest Tennessee** – Cary Vaughn; and
- **Greater Memphis** – J. Edward (Ted) Townsend III.

Investing in Innovation

At the Tennessee Next Conference in May 2011 in Nashville, Haslam detailed a major state-wide innovation initiative focusing on better coordination of innovation activities across the state, increasing technology transfer and commercialization, promoting entrepreneurship, and enhancing Tennessee companies' access to early-stage capital.

Reducing Business Regulation

Haslam asked ECD to lead a review of federal and state business regulations. ECD worked

with existing Tennessee businesses, business advocacy groups, and state agencies to identify federal and state laws and regulations inhibiting job growth. After performing a cost-benefit analysis of regulations identified as burdensome, ECD presented recommendations to the governor and congressional delegation in fall 2011.

To implement the plan, ECD has undergone a significant reorganization resulting in a new senior leadership team as well as a 35 percent reduction in staff. ECD was the first state agency to complete the efficiency and effectiveness review process Haslam requested of every state government agency.

“In an age of limited resources, Tennessee taxpayers want the state to focus on those activities that will result in a substantial return on investment,” said ECD Commissioner Bill Hagerty. “ECD’s reorganization aligned the department’s resources with the governor’s Jobs4TN plan while simultaneously eliminating functions the state should no longer be performing.”

Jobs4TN is another component of the governor’s comprehensive jobs plan to support and encourage investment of new business and existing business in Tennessee. His jobs plan also includes education reform initiatives that focus on children in the classroom and a well-educated, quality workforce, which is the most important long-term strategy for successful economic development.

Another piece of the plan is ensuring a business-friendly environment in Tennessee strengthened through less cumbersome rules and regulations on business along with tort reform to curb lawsuits and provide certainty around corporate legal issues. ■

For more information on the Jobs4TN plan and the department’s review, please visit www.tn.gov/ecd.

ECD restructured its field staff to establish a jobs base camp in each of nine regions across the state.



STARTUPTN

RESOURCE NETWORK LAUNCHED

Anyone in Tennessee who wants to build, help, or work with startup businesses should join Startup Tennessee at www.StartupTN.com.

Startup Tennessee is a public-private partnership designed to connect and align entrepreneurial efforts across Tennessee. The program was launched in 2011 as part of Governor Haslam's effort to make Tennessee the number-one state in the Southeast in which to start and grow a company. Startup Tennessee was the second state in the nation to join the Startup America Partnership. The program operates as the first-ever, statewide regional accelerator, launching, linking and leveraging nine regional accelerators across the state.

Through the StartupTN.com website, the program equips startups and entrepreneurs with the resources they need to launch, grow, and raise capital for high-growth potential companies, with the goal of building businesses that create jobs for Tennessee. In October 2011, StartupTN was selected by the Startup America Partnership to host and train 15 other states on cultivating entrepreneurial ecosystems. Governor Haslam appointed Michael Burcham, serial entrepreneur and CEO of the Entrepreneur Center, to lead Startup Tennessee and entrepreneurship across the state.

"Our research tells us that a significant number of jobs in Tennessee come from people starting new companies. If we can create a system which helps entrepreneurs develop a sustainable business model and grow their company, we can make a significant impact on job growth in our state."

—ECD Commissioner Bill Hagerty

StartupTN.com connects entrepreneurs with training opportunities, mentors, and investors across the state who could potentially provide capital to early-stage companies. Startup

Tennessee will regularly convene business accelerators from across the state to share best practices and will provide entrepreneurs with access to free or low-cost resources from companies such as Hewlett-Packard, IBM, and Salesforce.com. These latter benefits are possible through Startup Tennessee's partnership with Startup America, a national public-private partnership focused on growing entrepreneurs across the nation.

ECD posted a request-for-information (RFI) on the agency's website in June 2011 to gather feedback on a number of questions including best practices in recruiting and training entrepreneurs, strategies for measuring the success of business accelerators, and strategies for helping business accelerators become financially self-sustaining over time.

Resource Network

Startup Tennessee has launched the Startup Tennessee Resource Network, a database to connect entrepreneurs, mentors, investors, and business partners throughout Tennessee. Entrepreneurs with access to resources and personal networks build businesses that create jobs.

The Startup Tennessee Resource Network connects entrepreneurs with the ECD regional accelerator for their county who can assist them with launching their business and connect them to the statewide resources that are in place to help startup companies launch and be successful. The network is the front door and entrepreneurs' first stop for all entrepreneurial activity in the state.

"By connecting Tennessee entrepreneurs, trained mentors, business partners that want to



STARTUP TENNESSEE

ENTREPRENEURSHIP CREATES JOBS

work with startup companies, and investors, the network can help drive entrepreneurial and new business growth throughout every region in Tennessee,” said Burcham. “By joining StartupTN.com, entrepreneurs get connected to the network, which allows us to connect them with the people and resources that are in place to help them succeed.”

Regional Contacts

Startup Tennessee helped each of the nine Tennessee ECD economic regions to launch a business accelerator and provide the technical support to connect entrepreneurs throughout the state. Both Startup Tennessee and these regional business accelerators are part of the Governor’s INCITE Initiative, a key component of the Governor’s Jobs4TN plan. The following regions have had successful launch sessions and designated a primary point of contact for its region.

- **Northern Middle Tennessee** - Nashville - Entrepreneur Center
- **East Tennessee** - Knoxville - ETRAC
- **Southeast Tennessee** - Chattanooga - Company Lab
- **Greater Memphis** Regional Accelerator
- **Southern Middle** - Tullahoma - SMTEC (Southern Middle Tennessee Entrepreneur Centers)

Nashville’s Entrepreneur Center

The Entrepreneur Center serves as a gateway that fuses training, relationships, and resources to cultivate economic development and drive Nashville’s future as the epicenter of entrepreneurial endeavors. The center opened its doors in August 2010 after recommendations from the

Nashville Chamber of Commerce. It has been successful as a partnership of local and state government support, private interests, and the middle Tennessee business community at large to raise the quality of resources available to the Nashville entrepreneurial and small business community. In 2011, it was named the North Middle Tennessee StartupTN Regional Accelerator for area entrepreneurs.

Resources to help middle Tennessee’s entrepreneur community include:

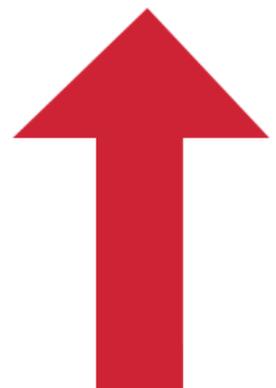
- accelerator space,
- training,
- networking,
- educational materials, and
- mentoring.

Startup America Partnership

The Startup America Partnership was launched at the White House in response to President Obama’s call to celebrate, inspire, and accelerate high-growth entrepreneurship throughout the nation. The partnership is bringing together an alliance of major corporations, funders, service providers, mentors, and advisors working to dramatically increase the prevalence and success of high-growth enterprises in the U.S.

AOL co-founder Steve Case chairs the partnership, and the Kauffman and Case Foundations are founding partners. American Express OPEN, Dell Inc., Intuit Inc., and Microsoft are sponsors. The partnership will identify, measure and report on the effectiveness of cross-sector collaboration in support of entrepreneurial ventures and its effect on job creation and growth. ■

**The network is
the front door and
entrepreneurs’
first stop for all
entrepreneurial
activity in the state.**



INCITE Initiative

First Step toward Innovation Leadership in the Southeast

INCITE is a \$50 million initiative designed to support innovation across the state. The goal of the program, named for its focus on innovation, commercialization, investment, technology, and entrepreneurship, is to raise Tennessee's profile in innovation-based economic development and drive growth in the creation of knowledge-based jobs. INCITE is a component of the Jobs4TN strategy and is managed by the Tennessee Department of Economic and Community Development (ECD).

"In a global economy, a focus on innovation along with raising our achievements in education is the best approach to moving our state's economy forward," said Governor Bill Haslam. "Tennessee has remarkable assets in research and development. We need to do a better job of leveraging these assets and growing innovative new companies to reach our goal of becoming the number-one location in the Southeast for high-quality jobs."

INCITE's Four Areas of Focus

- **Innovation Coordination**—Haslam's Jobs4TN strategy created nine distinct economic development regions across the state. ECD is working with each of the nine regions to develop a strategic plan for economic development, each containing a strategy for developing innovation using the region's unique assets. The Tennessee Technology Development Corporation (TTDC) plays a key role in assisting with the development of these plans and is partnering with ECD to hold an annual Governor's Conference on Innovation to share best practices.
- **Commercialization**—ECD will launch a series of initiatives designed to help move new products and technologies from the research lab to the marketplace faster. In March 2011, Haslam announced \$10 million in funding for the Memphis Research Consortium to enhance commercialization partnerships as a first step in this process. ECD will work with TTDC to identify other opportunities to enhance technology commercialization activities across the state.
- **Entrepreneurship**—ECD will fund a new or existing business incubator in each of the state's nine economic development regions. To receive funding, business incubators will commit to meeting critical benchmarks, such as raising specific amounts of private sector capital for its tenant companies. ECD will also create a statewide incubator network to share best practices and support efforts to raise private capital. As part of this effort, a Governor's Award for Entrepreneurship will be awarded each year at the Governor's Conference on Innovation.
- **Co-Investment Funds**—Tennessee targeted \$30 million toward the creation of early-stage, seed, and mezzanine capital co-investment funds. These funds were designed to be self-sustaining and to complement Tennessee's existing TNInvestco and Pathway Lending programs. ECD is currently in discussions with the U.S. Treasury Department to provide funding for these programs through the State Small Business Credit Initiative. The co-investment fund became operational in fall 2011. The remainder of the investment is made up of a combination of state and federal funds.

"We feel INCITE is the best approach for the state in leveraging the energy and capital of the private sector to grow innovative companies in Tennessee," ECD Commissioner Bill Hagerty said. "Tennessee has a great entrepreneurial spirit and great innovation assets. We simply need to enhance the environment for those ideas to take root, grow, and create new jobs." ■



TODAY'S IDEAS TOMORROW'S JOBS

The INCITE Co-Investment Fund

**A venture capital program designed
to stimulate the growth and development of innovative
small businesses in Tennessee**

The INCITE Co-Investment Fund is a venture capital program designed to stimulate the growth and development of innovative small businesses in Tennessee and increase the number of better-paying, high-quality jobs in our state. Backed entirely by a \$29.7 million award through the U.S. Department of Treasury's State Small Business Credit Initiative, the program is expected to spur additional private-sector investment of up to \$300 million to accelerate the expansion of Tennessee's economy.

The fund is a key component of Governor Bill Haslam's \$50 million INCITE (innovation, commercialization, investment, technology and entrepreneurship) initiative to raise Tennessee's profile in innovation-based economic development and drive growth in the creation of knowledge-based jobs. In addition to fostering job creation, the goals

of the fund are to increase access to capital for small businesses at various stages of development, accelerate technology commercialization from the state's research institutions into Tennessee companies, and minimize administrative costs of managing the program in order to maximize funding to Tennessee companies.

The fund, designed by the ECD, is administered by the Tennessee Technology Development Corporation (TTDC).

The Tennessee Department of Economic and Community Development's mission is to develop strategies that help make Tennessee the number-one location in the Southeast for high quality jobs. The department seeks to attract new corporate investment in Tennessee and works with Tennessee companies to facilitate expansion and economic growth.

ECD will launch a series of initiatives designed to help move new products and technologies from the research lab to the marketplace faster.

**Tennessee Technology Development Corporation and ECD
will hold an annual Governor's Conference on Innovation
to share best practices.**

TNTrade

Statewide Initiative Boosts Imports

- Eligible businesses will be reimbursed for 50% of any one-time export-related expense, up to \$5,000.
- ECD organized and funded a trade mission to China and South Korea for medical device manufacturers and healthcare companies.



A new state initiative to boost Tennessee exports was launched in December 2011. The program, TNTrade, is designed to help small and medium-sized businesses grow their export activity and consists of two primary components: the Market Access Program (MAP) and a 2012 trade mission to China and South Korea focused on medical device manufacturers. Governor Bill Haslam and Department of Economic and Community Development (ECD) Commissioner Bill Hagerty announced the launch at a kickoff event at the FedEx Institute of Technology in Memphis. Also in attendance were officials from the U.S. Small Business Administration, U.S. Commercial Service, and Tennessee Small Business Development Centers.

“The TNTrade program is key to our strategy to increase export activity in the state,” Haslam said. “It is important to help our Tennessee businesses open up new markets, explore new sources of revenue and find new customers, all of which will improve the overall economy in the state and help us on our way to becoming the number-one location in the Southeast for high-quality jobs.”

Commissioner Hagerty, ECD Assistant Commissioner Will Alexander, and other members of the ECD staff explained the program, which is funded by a \$375,000 State Trade and Export

Promotion (STEP) grant from the U.S. Small Business Administration.

“Governor Haslam has placed an emphasis on promoting exports as part of our international economic development strategy,” Hagerty said. “The funds awarded to us through the STEP grant will allow us to drive interest and activity in this aspect of our economy. We are grateful to our partners at the U.S. Small Business Administration, United States Commercial Service, and Tennessee Small Business Development Centers for their help in developing and implementing the program.”

Primary Components

- **Market Access Program (MAP):** Eligible businesses will receive a reimbursement equal to 50% of any one-time export-related expense (i.e., trade show participation, consultant fees), with a maximum reimbursement amount of \$5,000 per company.
- **Medical Device Trade Mission:** ECD organized and funded the majority of the costs of a trade mission to China and South Korea for medical device manufacturers and other healthcare companies in April 2012. ■

For more information, or to apply to receive MAP funds, visit www.tn.gov/ecd/tnttrade.

REGIONAL STRATEGIC PLAN

Recruiting businesses to relocate is a cornerstone of the region's economic development strategy. High-profile relocations, such as Nissan North America in 2006, not only add jobs but also send a message to the business community that middle Tennessee is an attractive place to do business. Because companies tend to form "clusters" with peers in their industry, the region holds a competitive advantage in the healthcare, automotive, and music sectors. The region is also well suited to compete for headquarters/business services projects, and its location and quality infrastructure make the area appealing to manufacturing and logistics/supply chain management companies as well.

ECD regional staff will offer assistance to city and county economic development organizations that are interested in enhancing business development processes based on national best practices. While comprehensive business development plans are in place for each of the 13 counties in the region, variation in resources among the organizations charged with executing these plans could result in some counties having more effective economic development processes than others. In an effort to insure that all partners are aware of best practices in business recruitment, ECD's regional staff will conduct meetings to share best practices in the development of marketing materials, responding to RFI/RFPs and engaging in other aspects of business recruitment. It is anticipated that these meetings will appeal most to economic development professionals located in rural areas of the region.

Regional staffs will conduct scheduled meetings with local economic development officials in each of the region's 13 counties to review the project pipeline. Business recruitment is most effective when the various interested stakeholders become involved in the process at an early stage and a primary goal of these meetings is to spur communication about the pipeline of prospects being courted by local officials. While it is likely that ECD regional staff will communicate with their local counterparts periodically

throughout the year as various issues arise, these formal meetings will ensure that discussions about the deal pipeline occur on a regular basis.

Existing Business Outreach

Existing businesses are responsible for more than 86 percent of all new jobs created in Tennessee. As a result, conducting meetings with existing employers is a key aspect of the ECD's regional staff activity. ECD's regional staff will work with chambers of commerce and local and regional community development organizations throughout the region to cooperatively arrange meetings with large employers that have not been contacted by the governor or commissioner. These meetings will accomplish the following objectives: show appreciation to companies that do business in Tennessee, open a line of communication so that companies are comfortable reaching out to ECD with questions regarding state government (i.e., underscore ECD's position as a "one-stop-shop"), educate companies about state incentives and other forms of assistance that may be available, obtain feedback on state programs and initiatives, identify potential relocation/expansion opportunities, and provide ECD regional staff with deeper industry knowledge and understanding of future challenges and opportunities facing companies in the region.

In addition, ECD regional staff will also accompany the Film, Entertainment and Music Commission's (FEMC) staff and local partners as appropriate on several of its initial meetings with entertainment industry companies in the region. The commissioner will be working with FEMC's local partners in reaching out to gather information about the entertainment industry and identify possible expansion and relocation opportunities. The involvement of ECD's regional staff will facilitate a concerted effort to expand and relocate industry participants to the area at an accelerated pace.

Because companies tend to form clusters with peers in their industry, the region holds a competitive advantage in the healthcare, automotive, and music sectors.

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NORTHERN MIDDLE TENNESSEE

	Population 2010	Median Age 2005-2009	HS Graduate or Higher % Population aged 25+	Bachelor's or Higher % Population aged 25+	Labor Force (Oct. 2011)	Available Labor (Oct. 2011)	Unemployment Rate (Oct. 2011)	Average Private Sector Annual Income (2010)	Nearest Public Riverport (in miles from county seat)	Nearest Commercial Airport (in miles from county seat)	Nearest Interstate (in miles from county seat)
NORTHERN MIDDLE	1,722,648	35.1	86.4%	29.2%	898,660	77,680	7.8%	\$42,881	Nashville and New Johnsonville	Nashville International	I-24, I-40 and I-65
Cheatham	39,105	38.3	81.4%	16.7%	21,410	1,950	8.2%	\$36,040	Nashville - 24 miles	Nashville International - 31 miles	Direct access to I-24 and I-40
Davidson	626,681	34.3	85.1%	33.6%	339,720	29,590	7.8%	\$49,113	Nashville - 0 miles	Nashville International - 10 miles	Direct access to I-24, I-40, I-65 and I-440
Dickson	49,666	37.5	80.4%	15.5%	24,510	2,500	9.2%	\$33,044	New Johnsonville - 35 miles	Nashville International - 50 miles	Direct access to I-40
Houston	8,426	41.7	79.3%	7.1%	4,080	390	8.7%	\$26,696	New Johnsonville - 32 miles	Nashville International - 79 miles	33 miles to access I-40 and 34 miles to I-24
Humphreys	18,538	40.9	81.2%	12.6%	9,430	990	9.4%	\$41,498	New Johnsonville - 11 miles	Nashville International - 83 miles	Direct access to I-40
Montgomery	172,331	30.7	90.3%	22.8%	73,660	7,630	9.3%	\$31,390	Nashville - 49 miles	Nashville International - 58 miles	Direct access to I-24
Robertson	66,283	36.4	79.5%	14.0%	35,260	3,100	7.9%	\$32,019	Nashville - 29 miles	Nashville International - 35 miles	Direct access to I-24 and I-65
Rutherford	262,604	32.1	87.5%	26.4%	141,440	11,990	7.6%	\$41,452	Nashville - 34 miles	Nashville International - 33 miles	Direct access to I-24
Stewart	13,324	41.2	79.2%	10.7%	6,100	650	9.7%	\$35,985	New Johnsonville - 52 miles	Nashville International - 88 miles	37 miles to access I-24
Sumner	160,645	37.8	84.9%	22.8%	83,640	6,980	7.5%	\$35,448	Nashville - 28 miles	Nashville International - 35 miles	Direct access to I-65
Trousdale	7,870	39.3	71.9%	9.7%	3,830	400	9.3%	\$27,646	Nashville - 49 miles	Nashville International - 42 miles	19 miles to access I-40
Williamson	183,182	38.1	93.9%	50.2%	94,210	6,530	6.3%	\$52,935	Nashville - 19 miles	Nashville International - 23 miles	Direct access to I-65
Wilson	113,993	38.4	87.4%	23.3%	61,370	4,980	7.3%	\$39,836	Nashville - 32 miles	Nashville International - 24 miles	Direct access to I-40

Source: US Census Bureau, US Bureau of Labor Statistics, Tennessee Department of Labor and Workforce Development

continued from page 11

A disciplined effort to call on existing businesses should boost the rate of expansion in the region by area businesses. Companies that understand available incentives and see the state as a partner in growth are more likely to invest in the region. Moreover, these businesses are key partners in the recruitment of their suppliers and customers to the region. Numerous business leaders have noted that the seemingly simple act of the State calling on companies and maintaining an open dialogue also goes a long way in influencing corporate decisions about expansion.

Innovation

Because much of the support for entrepreneurs in the region is centered in urban and suburban

areas, ECD's regional staff will market the services available at the Entrepreneur Center, the Nashville-based accelerator that received a \$250,000 grant as part of ECD's INCITE program, to contacts in both inner city and rural areas of the region. Northern Middle Tennessee is a leader in entrepreneurial activity among the nine regions due to its higher education assets, established industry clusters, and concentration of venture capital firms, but the rural counties in the region have not traditionally enjoyed the same access to entrepreneurial support as their urban and suburban counterparts.

Similarly, we see an opportunity for expanded outreach in some of our more distressed urban areas. To remedy this problem, ECD regional staff will make efforts to make economic development professionals as well as community and business leaders located in the region's inner

city and rural areas aware of the Entrepreneur Center and its services. The regional staff's goal is to have entrepreneurs from each of the region's rural counties participate in an Entrepreneur Center program in 2012.

In addition to this marketing initiative aimed at underserved markets, ECD regional staff also intends to work with the Entrepreneur Center to link all of the area's entrepreneurial support services. This will be accomplished by bringing all of the organizations together that support start-up and high-growth businesses. Through this effort, framework for cooperation between the various organizations will be established.

Workforce Development

The region's primary workforce-related challenge is a lack of qualified technology workers. The Nashville Technology Council estimates that approximately 1,000 technology-related jobs are currently unfilled in the Nashville area because qualified candidates are not available. ECD regional staff will assist the council in its efforts to recruit qualified technology workers from out-of-state by gathering information from existing businesses on technology-related workforce needs and supporting other research initiatives of the council. It is anticipated that ECD's assistance will help enable the Nashville Technology Council to conduct targeted technology-worker-recruitment activities in at least two out-of-state markets in 2012.

In addition to supporting the efforts of the Nashville Technology Council, ECD regional staff will also cooperate with employers, educational institutions, and workforce development boards to strengthen existing training programs and establish new training programs. Programs run by the Tennessee Technology Centers in Dickson, Hartsville, and Murfreesboro have been particularly effective at crafting programs that provide workers with skills required by specific employers. ECD will work with the various stakeholders involved in workforce development to ensure the continued success of these and other programs.

Action Items

- *Conduct training sessions for county-wide economic development organizations that seek assistance in enhancing business recruitment processes.* ECD staff will offer every county-wide economic development organization that is interested training to enhance business recruitment processes based on national best practices. The economic devel-

opment landscape is constantly changing, and ECD is well positioned to work with economic development professionals to make sure that marketing materials, RFP/RFI responses, and other aspects of their business recruitment efforts meet the standards of leading peer organizations elsewhere in the country. Organizations that seek ECD's assistance in enhancing their business development processes will attend customized training sessions conducted by Northern Middle Tennessee regional staff.

- *Engage as needed with the Film, Entertainment, and Music Commission (FEMC) in its existing business outreach efforts to help industry employers expand or relocate to the region.* Regional staff will accompany FEMC staff in meetings with existing entertainment companies as appropriate as well as share best practices in business outreach efforts with the commission on an as-needed basis. Regional staff will aim at supporting the FEMC efforts to gather information about the entertainment industry and identify possible expansion and relocation opportunities.
- *Promote innovation in the Northern Middle Tennessee region's rural counties and distressed inner-city areas by leveraging relationships in these counties to promote programs offered by the Entrepreneur Center.* Regional staff will ensure that ECD's efforts to boost innovation benefit start-ups across Northern Middle Tennessee by leveraging contacts in the region's rural counties and in distressed inner-city areas to market programs offered by the Entrepreneur Center. The staff's efforts will result in at least one entrepreneur from each of the region's rural counties and targeted inner-city areas participating in an Entrepreneur Center program.
- *Assist the Nashville Technology Council's efforts to recruit technology workers.* By gathering information from existing businesses on technology-related workforce needs and supporting other related initiatives focused on technology workers, ECD regional staff will help enable the Nashville Technology Council to conduct targeted technology-worker-recruitment activities. The council intends to make targeted recruitment efforts in at least two out-of-state markets in 2012.

To read more, download the entire Northwest Middle Tennessee Regional Strategic Plan at http://www.tn.gov/ecd/pdf/Regional_Strategic_Plans/Northern_Middle.pdf.

Northern Middle Tennessee is a leader in entrepreneurial activity among the nine regions due to its higher education assets, established industry clusters, and concentration of venture capital firms.

ECD 2011 ANNUAL REPORT

8,535 New Jobs, \$4 Billion Invested, Cost per Job

**The Tennessee Department of Economic and Community Development
2011 Annual Report details successful changes and historic milestones.**

The Tennessee Department of Economic and Community Development 2011 Annual Report details successful changes and historic milestones achieved during the year. In 2011, ECD projects and private sector growth accounted for 28,535 new jobs in Tennessee and more than \$4 billion in investment. After reshaping the model for economic development, ECD had one of the most productive years in the state's history, and job creation hit its highest mark in the past five years and since the onset of the global recession.

"Making Tennessee the number-one state in the Southeast for high-quality jobs continues to be a top priority for this administration," said Governor Bill Haslam. "Our Jobs4TN plan is working. We continue to focus on regionalism, existing businesses, and key clusters while also pursuing new businesses for Tennessee. I am convinced that Tennessee can compete with anyone when it comes to attracting jobs."

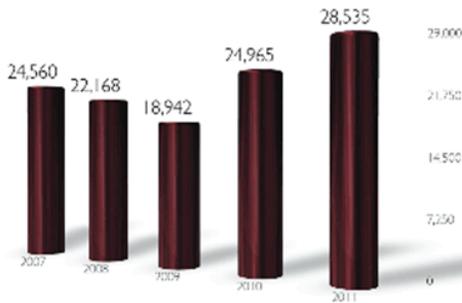
"Tennessee transformed its economic development model in 2011, applying solid business principles to set the stage for long-term growth," said ECD Commissioner Bill Hagerty. "The state experienced a record year for private sector job creation in this challenging, new economy. Tennessee is well-positioned to compete nationally and globally with one of the most business-friendly climates in the world."

After becoming the first department in state government to undergo Haslam's top-to-bottom review, ECD saw a significant realignment of departmental resources accompanied by a reduction in overall staff size of more than 40 percent. At the same time, the business development team, which includes those on the front lines of recruiting and retaining companies, grew by more than 70 percent. Additionally, ECD was able to significantly lower the average cost of incentives per new job created compared to the previous decade. In 2011, the average incentive cost per job was \$2,640 versus \$5,586 for the years 2002-2010, a reduction of more than 50 percent.

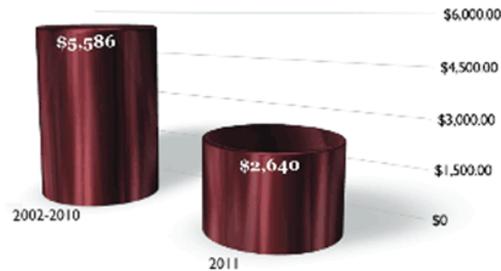
The top-to-bottom review resulted in the Jobs4TN economic development plan announced in April 2011. This new strategy narrowed ECD's focus to key sectors where the state holds a unique competitive advantage along with a renewed emphasis on assisting existing Tennessee companies that create the vast majority of all new jobs in the state.

Other components included a decentralization of ECD with the establishment of jobs base camps in nine regions throughout the state, a \$50 million investment in innovation through the INCITE program, and a review of burdensome and business-inhibiting federal and state regulations.

Jobs Created In 2011



ECD Cost Per Job



Key Results

Some key results since implementing the Jobs4TN plan include the following.

- Haslam, Hagerty, and ECD staff traveled the state to meet with more than 2,000 companies and over 700 economic development stakeholders.
- Each jobs base camp worked with local stakeholders to complete a strategic plan for their region.
- ECD partnered with the Entrepreneur Center in Nashville to make Tennessee the second state in the nation to start a state-level version of the Startup America Partnership, resulting in Startup Tennessee, a public-private partnership designed to connect and align entrepreneurial efforts across the state.
- Nine regional business accelerators were selected in each jobs base camp to assist area entrepreneurs as they develop business plans and launch companies that have the potential to create new jobs.
- The INCITE Co-Investment Fund was established to increase access to seed, early, and

expansion-stage capital for Tennessee businesses using \$30 million in federal funds from the State Small Business Credit Initiative.

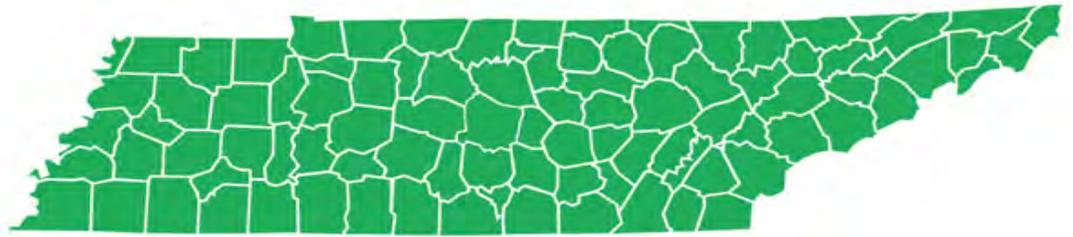
- ECD authored the Regulatory Reform Report summarizing an ECD-led review of federal and state regulations that negatively impact businesses and identifying possible obstacles to new investment.
- The challenges of job creation in rural Tennessee were addressed through new programs including a statewide site certification program, a partnership with TVA to provide best practices regional training for economic development professionals, and a digital factory pilot to create work-at-home business services opportunities.
- The TNTrade program was launched to boost Tennessee exports and consists of two primary components: the Market Access Program and a 2012 trade mission to China and South Korea focused on medical device manufacturers. ■

To read more, download the report at <http://www.tn.gov/ecd/pdf/2011AnnualReport.pdf>.

In 2011:

- **ECD had one of the most productive years in state history. Job creation hit its highest mark in five years, since the recession's onset.**
- **Average incentive cost per job was \$2,640 vs. \$5,586 for 2002-2010.**

ECONOMIC



by BERC and TACIR staff

TACIR is collaborating with BERC to provide a website to track the state's recovery from the recession that began in December 2007.

The economy remains the number-one topic of conversation throughout the country. Where do we stand, and when is a full recovery in sight? Since the recession started, the staff of the Tennessee Advisory Commission on Intergovernmental Relations (TACIR)* has worked to keep abreast of the situation and keep Tennessee decision-makers informed.

As a means of communicating this information, TACIR is collaborating with Middle Tennessee State University's Business and Economic Research Center to provide a website (mtsu.edu/berc/tacir) to track the state's economy during the recovery from the recession that began in December 2007. The site allows the reader to follow labor-force status including employment and unemployment numbers, housing data including a housing price index and construction activity, and sales tax collections. These data are available for the state and 10 metropolitan statistical areas across the state, and some of that data for all 95 Tennessee counties. Presented graphically, the data may also be downloaded in spreadsheets for use at the reader's convenience.

The National Bureau of Economic Research (NBER), a private, non-profit research organization that includes academic and non-academic economists, dates the expansion and contraction of the U.S. economy. NBER has dated the latest recession as beginning in December 2007 and

ending in June 2009. While the recession may have ended in 2009, satisfactory job growth has eluded the national and most local economies. To follow the progress of the Tennessee economy, indicators of economic activity are tracked going back at least until 2007.

Labor Force and Non-Farm Employment

Figure 1 shows the number of Tennesseans in the labor force and the total number employed since January 2008, the month after the economy peaked. The labor force is defined as the number of persons, aged 16 and older, who are employed or are actively seeking work. That number typically moves up and down as the economy expands and contracts, usually growing when the economy is growing and contracting when job opportunities become scarce. The data are provided for non-farm employment on only a monthly basis. Farm employment is not included in these figures because it is highly seasonal. Figure 1 shows that while the labor force fell at the early stages of the recession in 2008 and again in 2009, the trend, smoothing out the ups and downs, has been a slow increase in the number of persons identifying themselves as in the labor force. On the other hand, after the decline in the total number of people employed bottomed out in late 2009, employment growth has been very irregular and modest at best.

RECOVERY

BERC is collaborating with TACIR to provide a website to track the state's recovery from the recession that began in December 2007.

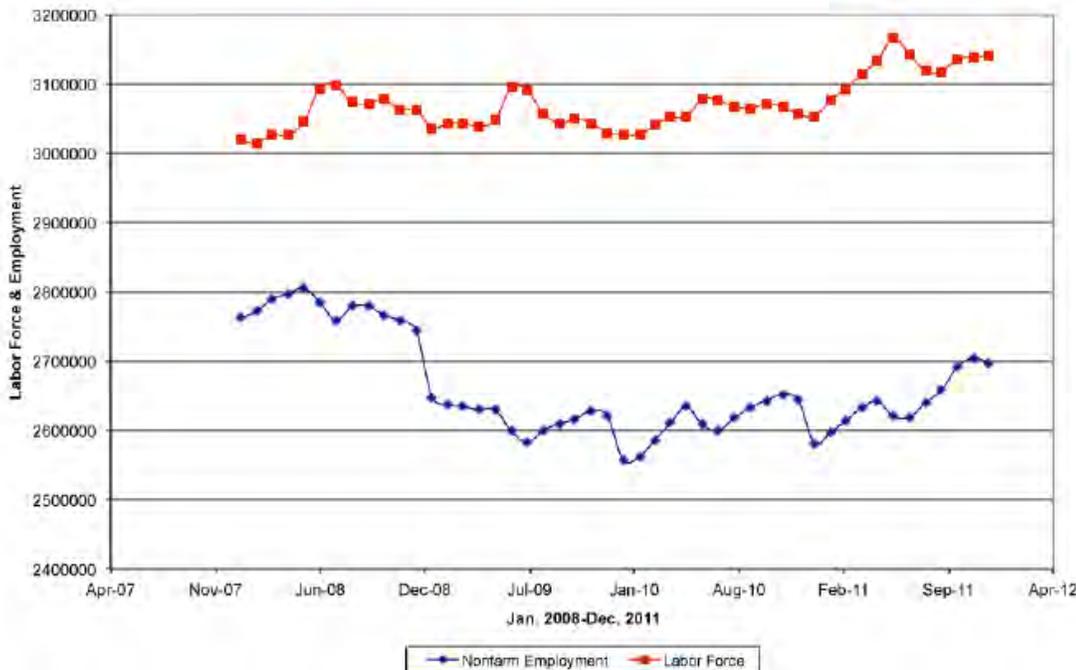
County Data

The Tracking Tennessee's Economic Recovery site provides this labor and employment data for each Tennessee county. Figure 2 on the next

page is a graph of the labor force in Anderson County for the period starting in October 2008. In addition to the graph, it is possible to download the actual data from January 2006 to the latest available.

continued on page 18

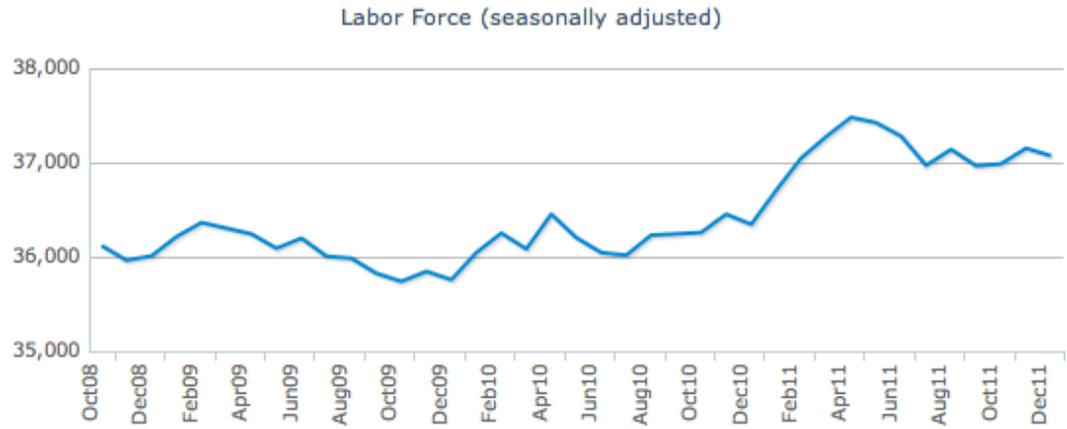
Fig. 1. Tennessee Labor Force and Non-Farm Employment



Farm employment is not included in these figures because it is highly seasonal.

Since the total number employed bottomed out in late 2009, employment growth has been irregular and modest at best.

Fig. 2. Anderson County Labor Force



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adjustments in much reported economic data. Unadjusted data are usually available as well from most sources.

Employment

Employment data are available as well. For example, Figure 3 below shows total non-farm employment for Bradley County monthly from October 2008 to December 2011. These data are seasonally adjusted, which means that the regular seasonal patterns that appear annually have been accounted for. An example would be employment that typically peaks annually just before the holiday period in November and December but declines in the early months of the year and then increases as spring arrives. Statistical programs are used to make these

The site also provides employment data by industry for the state and for the 10 metropolitan statistical areas (MSAs). Detailed data are available at the county level only on an annual basis and thus not reported on this site. Table 1 gives detailed state-level data for each December in the years 2007 through 2011. The numbers show the business cycle peak in December 2007, a decline in total nonfarm employment through December 2009, and then a painfully slow increase through November 2011. It is also evident that the cycle did not follow exactly the same pattern in every sector of the state’s economy.

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Fig. 3. Bradley County Employment

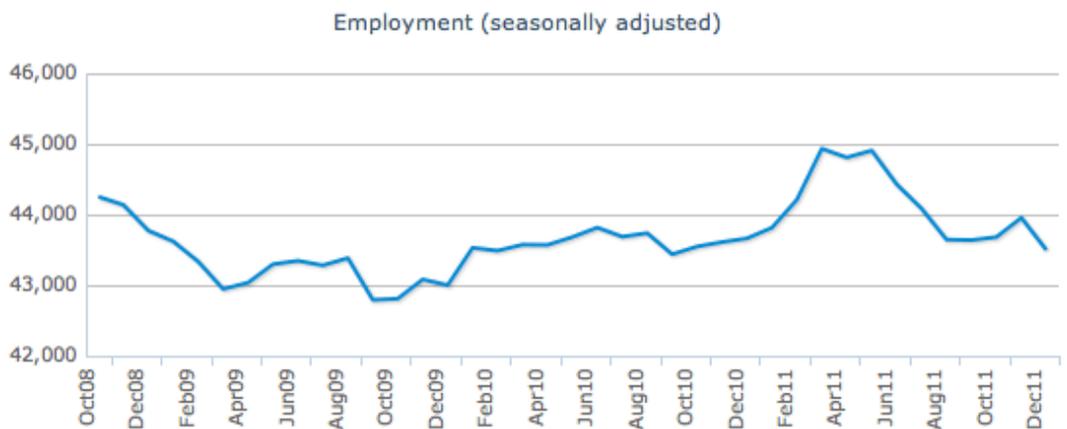


Table 1. Tennessee Employment by Industry Sector

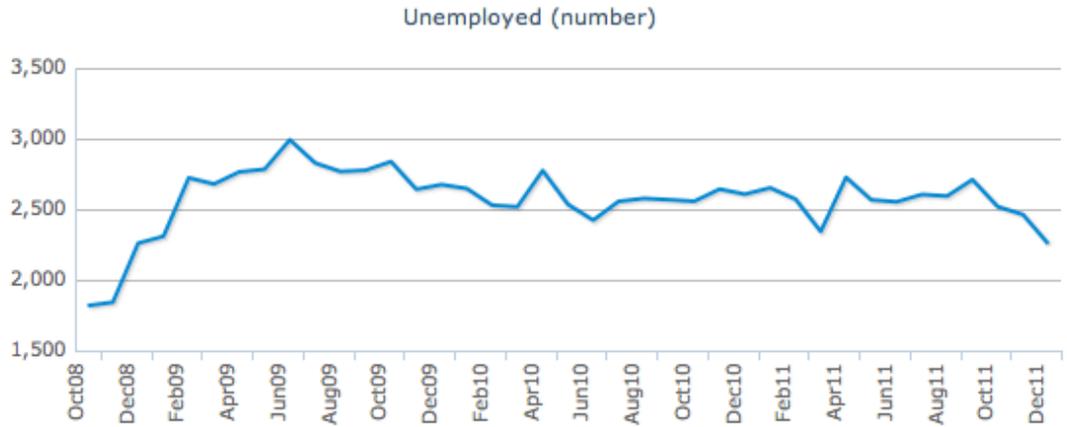
Name	Dec. 2007	Dec. 2008	Dec. 2009	Dec. 2010	Dec. 2011
Total Nonfarm	2,836.4	2,745.1	2,622.1	2,644.4	2,673.5
Total Private	2,405.3	2,306.5	2,184.4	2,207.2	
Goods Producing	512.2	464.9	403.8	401.6	
Service Providing	2,324.2	2,280.2	2,218.3	2,242.8	
Private Services Providing	1,893.1	1,841.6	1,780.6	1,805.6	
Natural Resources/Mining/Construction	138.5	123.2	104.9	106.4	114.4
Manufacturing	373.7	341.7	298.9	295.2	306.8
Trade/Transportation/Utilities	628.4	598.1	565.8	569.8	556.9
Wholesale Trade	133.9	128.2	118.1	118.2	
Retail Trade	346.5	327.6	316.2	314.6	308.9
Information	51.8	49.7	45.7	45.4	43.5
Financial Activities	146.3	144	139.6	137.6	133.6
Professional/Business Services	333.7	316.2	301.1	317.2	326.2
Education/Health Services	355	366.2	371	378.8	
Leisure/Hospitality	274.1	264.4 2	256.9	257.2	265.2
Other Services	103.8	103	100.5	99.6	101.3
Government	431.1	438.6	437.7	437.2	439.3

Source: Tennessee Department of Labor and Workforce Development Research and Statistics Division, BERG

**The numbers show the business cycle peak in December 2007,
decline through December 2009,
and slowly increase through November 2011.**

It is important to point out that the unemployed are only those people who report themselves as not working but are actively seeking work.

Fig. 4. Coffee County Unemployed



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Unemployment

Figure 1 makes clear that the gap in Tennessee between the number in the labor force and the number employed widened after 2008. That means the number of people unemployed has increased. Statistics don't always tell the complete story. It is important to point out that the unemployed are only those people who report themselves as not working but are actively seeking work. Consequently, it does not include people who would accept a job if offered one. In other words, people who for whatever reason are not working and may

be discouraged about finding work but would actually like to work are not included in these statistics. By the same token, the number of people employed includes people who may be working at jobs that underutilize their skills and experience, the so-called underemployed.

The U.S. Bureau of Labor Statistics, the official keepers of labor market statistics, estimates these numbers and makes them available but not at the county level. When discouraged workers and the underemployed are added to the number unemployed, an alternative national unemployment rate is estimated to be 14.9% (BLS). Figure 4 is a graph of the number of unem-

Fig. 5. Dyer County Unemployment Rate

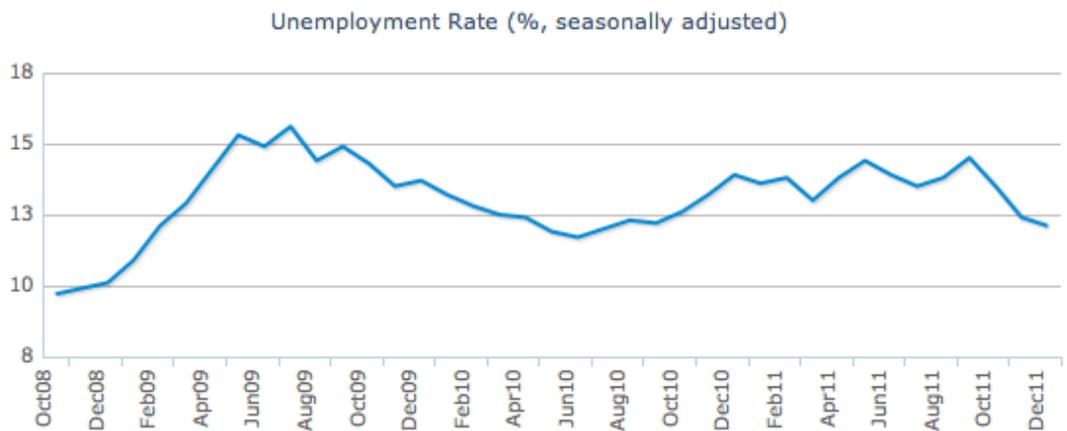


Table 2. Unemployment Rate (% of labor force) for Tennessee MSAs (not seasonally adjusted)

Area	Nov. 2007	Nov. 2008	Nov. 2009	Nov. 2010	Nov. 2011
Chattanooga	4.8	6.7	9.3	8.6	7.7
Clarksville	5.6	7.9	10.6	10.5	9.6
Cleveland	5.1	7.3	9.7	9.5	8.7
Jackson	5.5	7.5	10.9	9.8	9.3
Johnson City	4.9	6.7	9.6	8.9	7.8
Kingsport-Bristol	4.4	6.2	9.7	8.7	7.6
Knoxville	4.1	6.1	8.6	7.7	6.9
Memphis	5.4	7.4	10.3	10.1	9.6
Morristown	5.3	8.7	13	11.5	10.8
Nashville	4.5	6.7	9.2	8.5	7.5
Tennessee	5.2	7.8	10.5	9.4	9.1
United States	4.7	6.8	9.9	9.8	8.7

Source: BERC, BLS

ployed persons in Coffee County. The graph shows that the number of unemployed peaked in the summer of 2009, remained at about 2,600 people for several months, and recently dipped to about 2,250 people.

Unemployment Rate

The unemployment rate is the percent of unemployed persons in the labor force. If the number of unemployed persons increases while the labor force remains constant, the unemployment rate will increase.

Figure 5 at left shows the unemployment rate for Dyer County. The disappointing pattern shows the unemployment rate peaking in the summer of 2009 and then falling, only to begin rising again in the summer of 2010. In late 2011 the rate began to fall again. Very simply, it reflects the structure of the economy of the county. This situation emphasizes the point that economic conditions are not identical across the

state, the nation, or the world. Local data and information are essential to understanding the current situation and planning for the future. As stated earlier, statistics by county and for the 10 MSAs across the state are available on the Tracking Tennessee's Economic Recovery site.

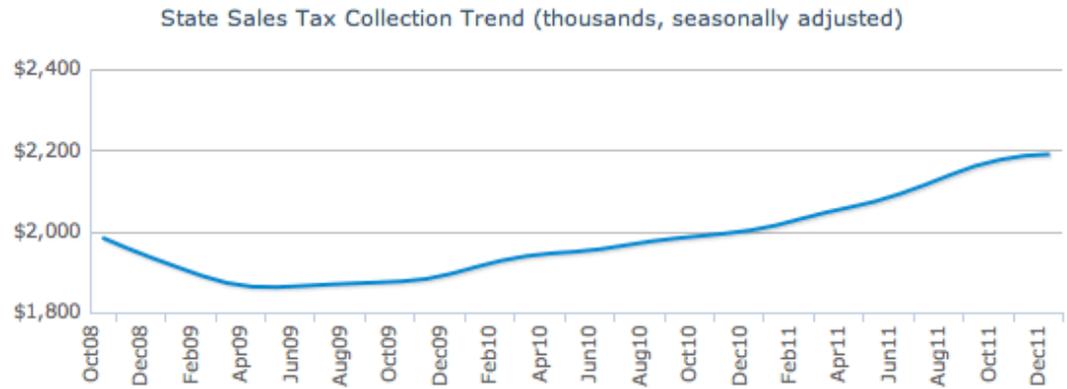
Table 2 gives the history of the unemployment rate in those areas since the beginning of the recession in December 2007. Once again, the painful experience of this period is evident with the unemployment rates rising, then falling, and recently, at least within Tennessee, rising again.

State Sales Tax Collections

As important as labor market conditions are, for county officials sales tax collections are of more immediate concern. Of course, the latter follows from the former, but we want to know "the bottom line," in this case what the employment situation means for county finances. Here, too, the Tracking Tennessee's Economic

continued on page 22

Fig. 6. Jefferson County Sales Tax Collection Trend



continued from page 21

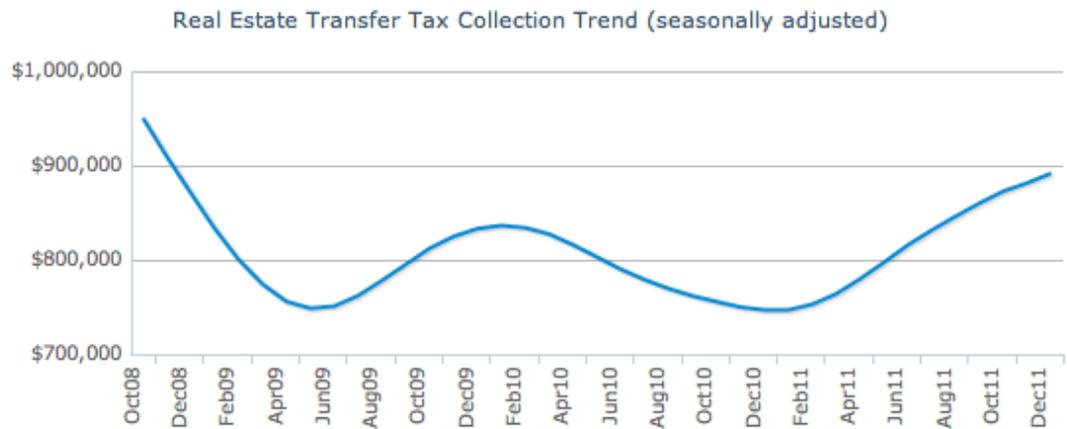
Recovery site provides help. Figure 6 above shows the state sales tax collections trend for Jefferson County. Since collections can fluctuate for reasons unrelated to underlying sales activity, it is better to examine trends rather than month-to-month changes. These data follow the same pattern as described for most of the economic variables previously discussed. Tax collections fell after the economy peaked in December 2007 and then bottomed out in mid-2009 with very slow improvement since that time. Jefferson County’s experience parallels the state’s sales tax collections, as might be expected. Of all the measures of economic activity included on the site, this picture is the most encouraging. Tennessee consumers are doing their part and would contribute more if the job market improved.

Real Estate Transfer Tax Collections

This statistic is not often reported but affords another indicator of county fiscal health. The website provides the following description of the variable. “Real estate transfer tax collections are obtained from monthly reports posted on the Tennessee Department of Revenue website. The tax is 0.37% of the value of a real estate transaction (\$0.37 per \$100 value). Thus, the taxes collected can change due to a change in the number of transactions or a change in the average value of property transferred. Since collections can be volatile, we report a trend that smooths out the short-term peaks and dips.”

Figure 7 shows the collections trend for Shelby County, which has been particularly hard hit in the real estate market. The collections fell

Fig. 7. Shelby County Real Estate Tax Collections Trend



sharply in the early stages of the recession and then showed a rebound, almost certainly associated with the first-time-homebuyer tax credit initiated in 2009, only to fall again through early 2011. The good news is that the trend is once again rising.

Building Permits

A final economic indicator reflects construction activity, traditionally a major element in Tennessee's economy. It is no secret that the most important cause of the recession was the collapse of the housing market across the country and, for that matter, internationally. The website devotes considerable attention to the housing market. Unfortunately, data are not available for every county, so building permit data are reported only for the state and the metropolitan areas. Figure 8 below gives the number of permits issued for single-family housing units since January 2008.

The same pattern is repeated in the chart: the number of permits issued dropped precipitously following the peak and has been up and down since that time. Building permits follow a distinct seasonal pattern. At best, the chart indicates that construction activity has reached a plateau and is no longer declining. Keep in

mind the admonition about the variance of economic measures across the state. For current information on the southeastern U.S. economy and the 6th Federal Reserve District, see the most recent Beige Book.

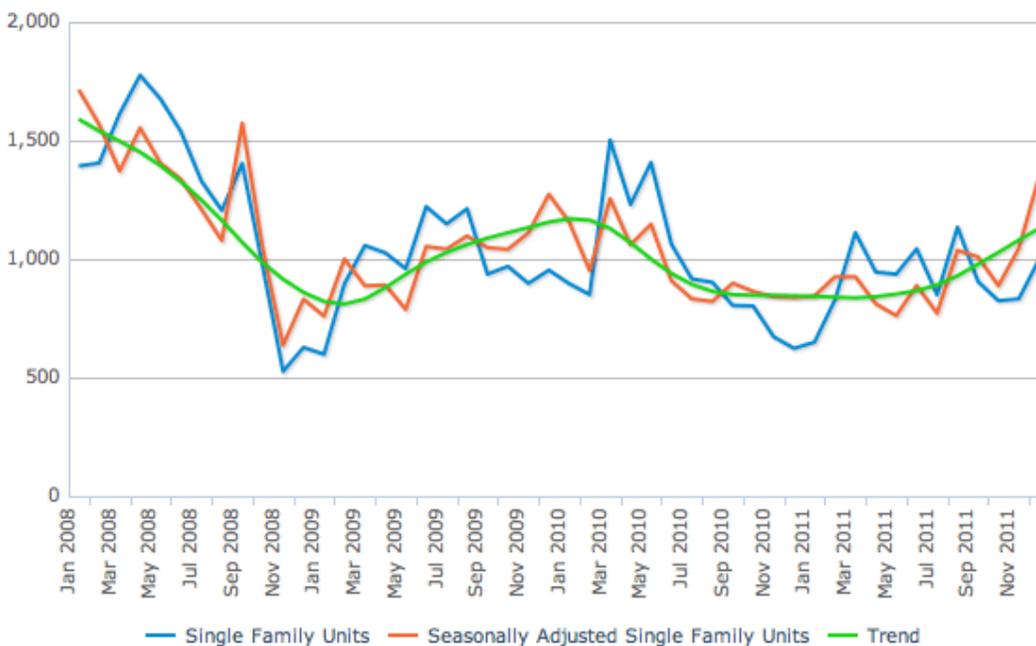
Conclusion

In conclusion, the Tennessee Advisory Commission on Intergovernmental Relations with the aid of Middle Tennessee State University's Business and Economic Research Center is making every effort to keep Tennesseans and their public officials informed about the state of the economy. The Tracking Tennessee's Economic Recovery website is one tool that is available to everyone at no charge. ■

The Business and Economic Research Center (BERC) at Middle Tennessee State University provides current regional economic data as a public service and conducts economic impact studies on commission. The Tennessee Advisory Commission on Intergovernmental Relations (TACIR), consisting of public officials from state and local government and private citizen members, serves as a forum for the discussion and resolution of intergovernmental problems. This article was originally published by the Tennessee County Services Association.

Of all the measures of economic activity included on the site, the sales tax picture is the most encouraging.

Fig. 8. Tennessee Building Permits Issued for Single-Family Units



GREEN JOBS IN TENNESSEE

by Murat Arik

EXECUTIVE SUMMARY

Although no clear definition exists, the term *green jobs* has been widely used to describe jobs in businesses that are particularly related to renewable energy, energy efficiency, or environmental sustainability. Both federal and state governments have invested significantly in efforts to define and measure the extent of the green economy in the United States. As part of these initiatives, the Business and Economic Research Center at Middle Tennessee State University has partnered with the Tennessee Department of Labor and Workforce Development to estimate the economic impact of six ground-breaking green investments in Tennessee: Hemlock Semiconductor, Wacker Chemie AG, Volkswagen, Nissan Leaf and Storage Battery Manufacturing, Tennessee Solar Institute and West Tennessee Solar Farm, and eTec Battery Charging Stations.

The purpose of this study is to estimate the economic impact of the investments on Tennessee's economy. This study addresses the following major research questions.

- Where can the six major green investments be classified within the national and local green activity frameworks?
- How many green jobs will be created with these investments?
- What are the major occupations associated with these green investments?

This study used multi-region IMPLAN models to estimate the economic impact of these investments.

Key Findings

Construction Phase

- By 2014, total green investments by these six major companies will total more than \$5.5 billion. The number of direct green jobs generated in 2011 was 5,674, with a total economic impact of 9,369 jobs across Tennessee.
- Total number of green construction jobs (direct + indirect + induced) was 6,893.



The Economic Impact of Selected Green Investments

Download the complete study:

<http://frank.mtsu.edu/~berc/pdfs/greenjobs.pdf>

Operation Phase

- At full employment, these companies are expected to employ directly 4,572 people by 2014.
- The total number of permanent jobs is 16,559,
 - 10,143 of which are green jobs.
- These investments are likely to generate increased demand for the following occupational categories and occupations.

■ Green Increased Demand Occupations

- Team assemblers
- First-line supervisors
- Electrical and electronic equipment assemblers
- Laborers

■ Green Enhanced Skills Occupations

- Machinists
- Inspectors and testers
- Maintenance and repair workers

■ Green New and Emerging Occupations

- Engineers
- Solar energy installation managers
- Logistics engineers and analysts
- Energy brokers

- The green manufacturing jobs created with these investments represent nearly 1.5 percent of the state's total manufacturing jobs, which may stop the downward trend in the manufacturing sector.

Complete Study

Download the complete study at <http://frank.mtsu.edu/~berc/pdfs/greenjobs.pdf>. ■

* *Murat Arik is associate director of the Business and Economic Research Center at Middle Tennessee State University.*

JOB CREATION

WHAT REALLY WORKS?

The role of the government is crucial. Whether you believe the government should add capital into the system to stimulate the economy or remove regulations that may be restricting the market, you can't avoid its importance.

The headlines are full of promises to create jobs. We're going to look at some of them as ways to step back and see the bigger picture. If they look familiar, there's a reason. In publishing, editors often speak of repurposing articles from past issues of magazines. They will pull them from the archives, dust them off, update some of the words and all of the illustrations and data, and then push them out to the public as if they were the newest thing. That's a lot of what we're seeing now—that plus a lack of the most basic knowledge of economics. It could spell trouble, or one of these proposals may work, or maybe we'll just wait long enough for the economy to fix itself. I suggest that part of our current unemployment is structural, not cyclical, and that the solution is centered in the marketplace, not in Washington.

Can Stimulus Money Fix the Problem?

The role of the government is crucial. Whether you believe the government should add capital into the system to stimulate the economy or remove regulations that may be restricting the market, you can't avoid its importance. Most recently, Congress passed a \$158 billion stimulus bill in 2007 and one for \$787 billion in 2008 and is currently debating the American Jobs Act and other measures.

What does stimulus money really do? If you give a large amount of cash to your cousin who is too much in debt to buy necessities, he will buy some groceries, but mostly he will pay

bills. This may be good for the person he owes, but he still doesn't have an income. If the person he pays doesn't have to pay it forward, he may spend it, but if he has sufficient resources, then the stimulus money will just sit there until some good reason to invest it comes along. Unless there's a good reason to do otherwise, sooner or later, all stimulus money gets piled in a wealthy person's or company's corner. If there were a good reason to do otherwise, you wouldn't need a stimulus.

What is missing from this approach is demand. If you can create demand and need government help to create supply, the tax code, guaranteed loans, and other incentives move the market toward satisfying the demand. What the government can't do is create the demand except in times of national catastrophe. Many scholars argue that World War II and not the New Deal got our economy moving out of the Great Depression. The New Deal is credited with staving off disaster much the way the most recent stimulus programs did. You buy time and possibly create good politics, but you haven't solved the problem.

How about Targeted Industries?

The solution we most hear about in the media is the government providing support for targeted industries. Just like the pure stimulus, targeted support involves the tax code, guaranteed loans, and other incentives. This approach is based on two possibilities.

**Promises to create jobs could spell trouble,
or one of these proposals may work,
or maybe we'll just wait long enough for the economy to fix itself.**

by David Hayes

■ **First**, there is the possibility that demand already exists that is not being met because one or more of the factors of production are missing. A current advertisement sponsored by the American Petroleum Institute (API) says, “By erasing burdensome regulations, the oil industry could create one million jobs by 2018 and more than 1.4 million by 2030.” In related statements, mostly by politicians, we are led to believe that this increased oil production will lower the cost of gasoline in the U.S. Assuming existing refineries can process some of the oil, it will still take several years to build new refineries (assuming there are places that will let you), and there are no guarantees that the domestically produced oil will remain in this country. It’s a global market, and oil production goes where the highest price is. That’s capitalism. The industry is not asking for the government to lend them money, just permit them to drill new wells and ship the oil. That leaves them free to sell it to the highest bidder. Take a look at the current oil boom in North Dakota and multiply it exponentially. Some people are making money there, as will the developers in the new production envisioned by the API’s “one million jobs by 2018” ad. Problems have already risen from the sudden shift in the location of workers, and the potential for environmental damage will remain behind after the petroleum companies have gone elsewhere. Regardless, that’s too far in the future to be considered a viable solution to a current problem.

■ **A second possibility** is that an undefined demand is represented, for example, by environmentally sensitive or “green” jobs in areas such as solar energy. We have the technology and the skill but not the manufacturing capacity. Building that capacity will take time and a lot of money, and once it’s built, labor costs will be high. We can reduce our dependence on fossil fuels and have cleaner air by increasing the use of green technology, but this does not in itself create jobs. The best way to increase the use of solar panels, for example, is to reduce their cost, and the best way to do that would be to manufacture the components offshore. Clearly, this would not help the unemployed in the U.S. If the panels were manufactured here, we could not afford them. If subsidized by the government, private business will be crowded out, and the result will be inflationary.

While we’re on this topic, let’s look at the globalization of the labor market. After all, we are not only interested in creating jobs so currently unemployed and underemployed people can provide a good standard of living for their families. These jobs translate into increased GDP, and this growth funds a lot of other things, particularly those projects funded with government resources for the benefit of Congressional constituents. It isn’t just a matter of moving to North Dakota. The largest amount of job growth will occur overseas. Much of that

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**According to an IDC study,
“The highest percentage of new jobs will occur in emerging markets,”
and
“nearly 1.2 million new cloud-related jobs will be created in the U.S. and Canada.”**

JOB CREATION: WHAT REALLY WORKS?

If private industry were able to create jobs and government helped them find people to fill them, we might have a solution to at least part of our problem.

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job growth will be tied to the use of computers. Below are findings from a recent study by the analyst firm International Data Corporation:

“Spending on public and private IT cloud services will generate nearly 14 million jobs worldwide from 2011 to 2015. The research, commissioned by Microsoft, also found that IT innovation created by cloud computing could produce \$1.1 trillion a year in new business revenues.

The highest percentage of new jobs will occur in emerging markets, according to the study, especially China and India, which together are expected to produce nearly 6.8 million cloud-enabled jobs between 2011 and 2015.

Nearly 1.2 million new cloud-related jobs will be created in the U.S. and Canada.”

—www.microsoft.com/presspass/features/2012/mar12/03-05CloudComputingJobs.msp

This suggests not only that job growth, fueled in part by lower wages and costs of living, will occur outside our borders but that the growth we are likely to experience will occur in IT-related careers. This directs us to our next question.

What about Targeting Specific Jobs?

When the government targets specific jobs by creating the demand for them, we have a short-lived fix with potentially long-lived inflation. This puts us much in the same situation as with stimulus and targeted-industry programs. However, if private industry were able to create jobs and government helped them find people to fill them, we might have a solution to at least part of our problem. Susan Cowden, administrator, Workforce Development Division, Tennessee Department of Labor & Workforce Development, recently stated that “over 1,000 information technology jobs in the Nashville area” are vacant because qualified applicants are not available. In basic economic terms, this

is structural unemployment, whereby workers’ skills do not match job requirements. In structural, as opposed to cyclical, unemployment, government policies such as stimulus programs and low interest rates have little effect, and, as noted earlier, can lead to inflation. In targeting specific jobs, the government helps by offering training to close the gap between what an unemployed or underemployed worker can do and what is needed in the job market. Using IT skills as a surrogate for the bigger picture, I have extracted the following information from the Technology Hiring Trends Report.

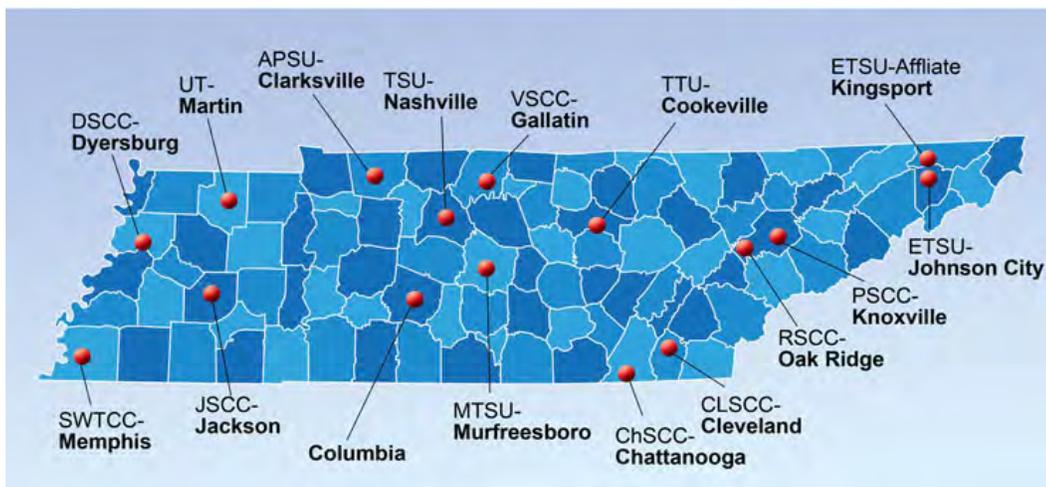
- 1,044 technology related positions were open in Middle Tennessee, up from the third quarter of 2011 (+12%). The figure for the State of Tennessee is 1,410.
- The number of advertised positions in Middle Tennessee is the highest since 2001 with the exception of 2007, immediately before the economic downturn.
- Healthcare continues to lead all industry sectors with education and accounting rounding out the top five.

—www.technologycouncil.com/wp-content/uploads/2012/01/NTC-Jobs-Report-4Q11.pdf

Training centers and technical schools provide workers with the skills needed to close this gap not only in IT but also in skills needed in building trades, logistics, and many other areas. Governmental funding is also available at the existing-job level to incentivize employers to train existing employees using on-the-job training (OJT) techniques. Because training facilities and personnel are already in place, the cost of adding value is less than starting a new program that targets an entire industry and especially less than not targeting anything at all. This approach of targeting specific jobs will also be the best way to help returning veterans re-enter the workforce. ■

David Hayes, EA, CFP, is an adjunct instructor in the Economics and Finance Department of Middle Tennessee State University and serves on the Tennessee Workforce Development Board.

TSBDC NETWORK CREATES JOBS



The Tennessee Small Business Development Center (TSBDC), a network of 17 locations headquartered at Middle Tennessee State University, has been serving Tennessee businesses since 1984. The network's mission is to enhance economic development in Tennessee by providing quality solutions to the existing and potential small business community through consultation, education, referral, and support services.

Results

- The TSBDC Assisted 20,859 Businesses in 2011 with counseling and training.
- TSBDC counseled 5,267 clients in 2011 during more than 19,942 hours of counseling.
- TSBDC offered 917 training sessions with a total of 15,592 attendees.
- TSBDC created 886 jobs and retained more than 1,025.
- TSBDC capital infusion for year 2011 was \$53,364,770.¹
- Benefits to cost ratio for all counseling clients is 3.44/1.00.
- Benefits to cost ratio for all long term counseling to established business clients is 5.66/1.00.
- TSBDC trained 15,592 people in small business related subjects.
- Minority business owners represent over 36% of TSBDC counseling clients.
- Female business owners represent 47% of TSBDC counseling clients.
- TSBDC served 547 veterans in 2011. Veteran business owners represent 10% of TSBDC clients. In addition TSBDC counseled 122 members on active duty or in the Guard or Reserves.
- TSBDC clients generated \$30 million in incremental sales.²
- TSBDC clients retained \$34.9 million in existing sales.²

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**The Tennessee
Small Business
Development Center
2011 summary
itemizes its
employment impact.**

**Estimated state
unemployment
benefits saved
2008 - 3Q2011 =
\$25,726,113.75**

TSBDC Mission

Recognizing that small business is the economic backbone of the State of Tennessee, the TSBDC's mission is to be the premier provider of quality solutions to potential and existing small businesses' needs through consultation, education, referral, and support services. By providing these services through its interactive network

of resource partners, the TSBDC promotes growth and prosperity in the domestic and international markets of the business community and enhances its economic impact on the State of Tennessee. The professionals of the TSBDC network prepare customized training programs to meet specific needs.

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Estimated State Unemployment Benefits Saved 2008-3Q2011³

- Average Tennessee unemployment claim duration: 15 weeks⁴
- Average Tennessee unemployment benefit: \$224.73/week⁴
- TSBDC jobs created 2008 - Q3 2011: 3,615⁵
- TSBDC jobs retained 2008 - Q3 2011: 3,692⁵

Estimated state unemployment benefits saved:

\$25,726,113.75

= (Avg. weeks of duration) *
(Avg. benefit \$ per week) *
(TSBDC jobs created and retained)

Training Programs for New Businesses

- starting a small business,
- writing a business plan,
- bidding on government contracts,
- increasing marketing and sales efforts,
- planning for business succession,
- understanding taxes, and
- supervisory management.

Patrick Geho is the state executive director of the Tennessee Small Business Development Center and an associate professor in MTSU's Department of Business Communication and Entrepreneurship.

Notes

1. Small Business Jobs Act and Core SBA-SBDC Programs
2. All state research data is from James A. Chrisman, Ph.D., *Economic Impact of Small Business Development Center Counseling Activities in Tennessee*.
3. Q42011 not reported due to U.S. BLS report not being released by publication date
4. Source: U.S. Bureau of Labor Statistics, Division of Fiscal and Actuarial Services
5. TSBDC CIC (client-verified data)
6. Significant assumption: All jobs created and retained would have otherwise been receiving unemployment benefits.

Counseling

Topics for new businesses include

- ownership structure,
- business plan,
- banking needs,
- market research, and
- sales and marketing.

Topics for existing businesses include

- growth capital
- cash flow issues
- employee issues
- customer service
- growth issues
- government procurement, and
- thriving in hard times.

BUSINESS BIRTHS & EXPANSIONS, 2009

by Randy Gustafson

OVERVIEW AND COMPARISON TO 2001-2002

Because employment is a lagging indicator, very few industries showed net positive employment gains in the year after the recession ended.

However, there were 10,835 new businesses in Tennessee in 2009.

The Census Bureau's Statistics of U.S. Businesses series tracks establishment births and deaths by major industry. There is a lag of two to three years due to the time it takes to collect and process the data. The most recent data cover the period 2008-2009. Since that period covers the end of the Great Recession (December 2007 to June 2009), characteristics of businesses "rounding the corner" can be identified. The dataset is not a 100% complete picture of employment in Tennessee. It excludes non-employer businesses, railroads, animal and crop production, and most government entities. The data are complete back to 1997, making the only other comparative recession the one that lasted from March to November 2001. The data include information about both establishments and employment. A look at the establishment data for large establishments (over 500 employees) and all the rest reveals where job creation is the strongest.

Because employment is a lagging indicator, very few industries showed net positive

employment gains in the year after the recession ended. However, there were 10,835 new businesses in Tennessee in 2009. Large employers accounted for 2,258 new businesses, while the majority (8,577) had fewer than 500 employees. The total number of business deaths in 2008 outnumbered new businesses by a substantial margin. The only sector with a net gain was the health care and social assistance sector with five more establishments in 2009 than existed in 2008. New businesses created 97,813 jobs in 2009. Large firms accounted for fewer than half of the new jobs with 44,838. Again it is important to point out that net job change for the period was -174,034 because business deaths and contractions far outweighed births and expansions.

Business expansions had a larger impact on employment in Tennessee than did new businesses. Expansions of existing businesses created 161,467 new jobs. Large employers

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Business expansions had a larger impact on employment in Tennessee than did new businesses.

BUSINESS BIRTHS & EXPANSIONS

Information for every state is available at the U.S. Census Bureau website (www.census.gov/econ/susb/historical_data.html).

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The influence of large business was much more pronounced in the 2001-2002 period than in 2008-2009.

once again accounted for fewer than half of the new jobs with 77,963. There were 6,929 large firms hiring new employees and 21,461 smaller firms. Smaller existing firms, on average, created four new jobs, while large existing firms created 11 new jobs each.

Net job growth over the 2008-2009 period occurred in four industrial sectors: utilities, educational services, health care and social services, and other industries, not classified. Health care and social services generated a net increase of 3,475 jobs through expansion of existing establishments. In fact, the number of new and closing establishments was fairly close, 1,139 new health care and social service establishments as opposed to 1,134 that closed during the year. The net job change due to establishment births and deaths, however, was significantly negative, -4,364. Net job gains were wholly explained by the fact that 30% of existing health care and social services establishments expanded employment by a total of 27,914 jobs.

The retail trade sector had the greatest amount of “churn,” with 1,647 new businesses created and 2,281 ceasing to exist over the period. Job losses due to business deaths were more than offset by the gains for a net gain of 589. The retail sector lost overall, as there were 35,406 jobs lost through cutbacks at existing businesses. By far the largest net job loss was in the manufacturing sector with 52,000 jobs lost over the period. Large (500+ employees) firms lost nearly twice as many jobs as the smaller firms, 34,310 versus 17,690. The loss of jobs due to closing manufacturers outpaced the job gains from new ones by 6,894; however, workforce contractions at existing manufacturers were the major source of job losses, as 3,091 factories laid off 56,621 workers.

Comparison to Last Recession

A quick comparison to 2001-2002 figures shows some similarities. In that year, manufacturing was also the greatest source of net job losses at 42,993, with large manufacturers accounting for approximately 75 percent of the jobs lost. Net job gains occurred in eight sectors: utilities; information; finance and insurance; professional, scientific, and technical services; health care and social assistance; arts, entertainment, and recreation; accommodation and food services; and other business, not classified. The largest number of net job gains was in the accommodations and food services sector with an increase of 4,754. New accommodations and food services businesses defined the trend with 9,711 more jobs gained than lost through business closings. Existing business contractions outweighed expansions by 4,957.

For the two periods, the health care and social services and utilities sectors posted net job gains. However, the utilities sector is one of the smallest, with less than one percent of the total employment of the health care and social services sector (3,473/358,858) in 2008.

The influence of large business was much more pronounced in the 2001-2002 period than in 2008-2009. Job losses in the 2001-2002 period were concentrated in the larger establishments, with more than 83 percent of the total drop in employment occurring at firms with 500+ employees. In contrast, during the 2008-2009 period, large firms accounted for less than 55 percent of the net decline in employment. ■

Randy Gustafson is the director of the Tennessee State Data Center.

Table 1. Number of Establishments with Corresponding Employment Change, 2008-2009

NAICS Sector	Net Change		Births		Deaths		Expansions		Contractions	
	Firms	Employees	Firms	Employees	Firms	Employees	Firms	Employees	Firms	Employees
Total	-3,422	-174,034	10,835	97,813	14,257	-115,898	28,390	161,467	42,334	-317,416
Agriculture, forestry, fishing, & hunting	-11	-110	28	101	39	-148	44	109	72	-172
Mining, quarrying, oil & gas extraction	-8	-69	24	0	32	-488	63	445	77	0
Utilities	-2	77	5	0	7	0	37	131	28	-68
Construction	-1,183	-22,736	825	3,951	2,008	-9,353	1,837	8,797	4,117	-26,131
Manufacturing	-284	-52,000	309	5,487	593	-12,381	1,228	11,515	3,091	-56,621
Wholesale trade	-255	-13,377	420	3,288	675	-5,317	1,423	7,653	2,382	-19,001
Retail trade	-634	-19,180	1,647	13,750	2,281	-13,161	4,803	15,637	8,274	-35,406
Transportation & warehousing	-163	-11,921	411	5,256	574	-5,189	872	6,896	1,483	-18,884
Information	-88	-255	267	3,836	355	-2,811	499	2,888	675	-4,168
Finance & insurance	-146	-578	903	0	1,049	-5,887	1,909	7,272	2,350	-10,574
Real estate & rental & leasing	-156	-2,444	543	2,250	699	-2,501	843	3,096	1,498	-5,289
Professional, scientific, & technical services	-141	-7,907	1,009	4,542	1,150	-9,654	2,204	10,104	2,737	-12,899
Management of companies & enterprises	-29	-2,036	73	2,260	102	-2,346	347	5,940	451	-7,890
Administrative & support & waste management & remediation services	-74	-26,121	745	10,756	819	-11,127	1,391	21,996	2,230	-47,746
Educational services	-6	1,385	91	478	97	-516	381	4,105	315	-2,682
Health care & social assistance	5	3,475	1,139	10,835	1,134	-15,199	4,155	27,914	3,720	-20,075
Arts, entertainment, & recreation	-31	-4,133	218	1,638	249	-1,563	474	2,244	696	-6,452
Accommodation & food services	-69	-12,491	1,149	16,578	1,218	-13,542	2,911	15,341	4,730	-30,868
Other services (except public administration)	-165	-3,664	954	3,540	1,119	-4,507	2,962	9,381	3,403	-12,078
Industries not classified	18	51	75	0	57	-192	7	0	5	0

Source: U.S. Census Bureau, Business Information Tracking Series